## ABSTRACT OF THE DISCLOSURE

In a cooling-air cooler (10) for a gas-turbine plant (29) of a power plant, in which cooling-air cooler (10) first means (13, 14, 15) for spraying water into the cooling-air flow and second means (16, 17, 18) for generating steam are arranged in a pressure vessel (11), through which the cooling air flows, between a cooling-air inlet (12) and a cooling-air outlet (20) in the cooling-air flow, simplified operation is achieved in that a water separator (19) is provided on the cooling-air side in the direction of flow downstream of the first means (13, 14, 15).

(fig. 1)